

**Math 105 – College Algebra**  
**Louisiana Delta Community College**  
**Syllabus - Fall 2009**

**Instructor** – Chris Brandt

**Office Location** - Coenen 125

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**Office Hours** – 8:45-10 M-F; 11-11:30 M-F; 3-3:30 Tuesday and Thursday; 2-3 Friday

**1. Course Name:** College Algebra

**2. Course Prefix and Number:** Math 105

**3. Course Description:** Quadratic equations, systems of linear equations, inequalities, functions, graphs, exponential and logarithmic functions, complex numbers and theory of equations.

**4. Credit hours:** 3

**5. Prerequisites and Co-requisites:** Math 099 or placement in Math 105

**6. Text:** College Algebra Essentials – 3<sup>rd</sup> ed, Blitzer, Prentice Hall

**7. Other Text References:** MyMathLab is an optional resource for the course.  
A TI 83+ calculator is recommended

**8. Learning Outcomes:** Upon completion of this course, the student will be able to demonstrate the following:

1. Analyze basic real world situations and develop a mathematical strategy to resolve the problems dealing with:

- Rational Expressions
- Complex Fractions
- Rational Equations
- Systems of Equations
- Systems of Inequalities
- Radicals
- Functions
- Complex Numbers
- Exponential Functions
- Logarithmic Functions

## 9. Other Classroom Policies:

1. A scientific calculator is needed. A TI-83 or TI-84 is recommended. There will be several application problems where you would benefit by the use of a graphing calculator.
2. All grades are a personal issue – none are to be given out over the phone or by e-mail. If at all possible, all exams and quizzes will be graded and returned by the next class meeting.
3. Cell phones must be put away – not to be looked at or used in any way during exams or quizzes.
4. Make-ups for exams are for excused absences only and must be approved by the instructor before the exam is given.
5. Leaving class before class is over may result in an absence.

## 10. Evaluation/Assessment Measures:

There will be quizzes, one midterm, and one cumulative final exam. Quizzes will take place at the end of each week. There will be no makeups on quizzes. I will drop the two lowest quiz grades. If you miss a quiz, that will be one of your two drops that you are allowed.

Your course grade in this course is determined by the following formula:

Quizzes:	70%
Midterm Exam:	10%
Final Exam:	20%

To determine your grade at any time in the course use the following formula.

$$.70 * TestAverage + .10 * MidtermGrade + .2 * FinalExamScore.$$

Your course average is converted to a letter grade according to the departmental grading scale:

90-100	A
80-89	B
70-79	C
60-69	D
0-59	F

## Important Dates:

Classes begin – 8/24/09

Add/Drop – 8/24/09- 8/26/09

Labor Day- 9/7/09

Thanksgiving Holiday - 11/23/09-11/27/09

“W” deadline – 10/28/09

Final Exam Week – 12/7/09-12/11/09

**Tutoring:** Delta does offer free tutoring to all math students. Your instructor will give you a tutoring schedule and inform you of all tutoring sessions at Delta.

## 11.

## Tentative Course Outline

	Topic	Page #	Assignment
P.1	<b>Algebraic Expressions, Mathematical Models, and Real Numbers</b>	15	1-37 odd, 43-49 odd, 51, 57, 59, 61-65 odd, 85-101 odd
P.2	<b>Exponents and Scientific Notation</b>	31	1-105 odd
P.3	<b>Radicals and Rational Exponents</b>	46	1-44 odd, 55-107 odd
P.4	<b>Polynomials</b>	58	1-49 odd, 59-81 odd
P.5	<b>Factoring Polynomials</b>	71	1-55 odd, 65-83 odd
P.6	<b>Rational Expressions</b>	82	1-19 odd, 23-65 odd
PT	<b>Chapter P. Practice Test</b>	88	1-32 all

1.1	<b>Graphs and Graphing Utilities</b>	97	1-27 odd, 55, 57, 75-78 all
1.2	<b>Linear Equations and Rational Equations</b>	112	1-49 odd, 61, 63, 65
1.3	<b>Models and Applications</b>	126	1-9 odd, 19, 21, 25, 29, 33, 39, 43
1.4	<b>Complex Numbers</b>	135	1-43 odd, 58-62 all
1.5	<b>Quadratic Equations</b>	152	1-33 odd, 65-73 odd, 83-105 odd, 153, 154, 156
1.6	<b>Other Types of Equations</b>	168	1-7 odd, 11, 15, 19, 23, 31-37 odd, 41, 43, 61-71 odd
1.7	<b>Linear Inequalities and Absolute Value Inequalities</b>	185	27-49 odd, 51, 55, 59, 63, 67, 71, 75, 79
PT	<b>Chapter 1 Practice Test</b>	195	1-33 odd, 39, 41, 43

2.1	<b>Basic Functions and Their Graphs</b>	210	1-37 odd, 55-69 odd, 77, 81, 105, 109, 110
2.2	<b>More on Functions and Their Graphs</b>	223	1-9 odd, 17-31 odd
2.3	<b>Linear Functions and Slope</b>	239	1-57 odd, 89, 93
2.4	<b>More on Slope</b>	250	1-17 odd, 25, 27, 31, 32
2.5	<b>Transformations of Functions</b>	266	Handout and, 1-9 odd, 17-25 odd, 33, 35, 37, 45, 47, 53-59 odd, 67-73 odd, 81-89 odd
2.6	<b>Combinations of Functions; Composite Functions</b>	279	1-23 odd, 31-37 odd, 49-57 odd, 97
2.7	<b>Inverse Functions</b>	290	Handout and, 1-9 odd, 13, 15, 17, 29-37 odd, 39, 41
2.8	<b>Distance and Midpoint Formulas; Circles</b>	300	1-47 odd, 75, 77
PT	<b>Chapter 2 Practice Test</b>	308	1-8 all, 16, 18, 19, 20, 21, 22, 24, 25, 26, 28, 30, 31, 32

3.1	<b>Quadratic Functions</b>	324	1-29 odd, 57, 61, 65, 67, 69
3.2	<b>Polynomial Functions and Their Graphs</b>	338	1-39 odd
3.3	<b>Dividing Polynomials; Remainder and Factor Theorems</b>	351	17-39 odd
4.1	<b>Exponential Functions</b>	420	11-17 odd, 19-31 odd, 35-41 odd, 77, 79
4.2	<b>Logarithmic Functions</b>	434	1-39 odd, 43-55 odd, 81-97 odd

4.3	<b>Properties of Logarithms</b>	445	1-77 every other odd
4.4	<b>Exponential and Logarithmic Equations</b>	456	1-41 every other odd, 49-89 every other odd
PT	<b>Chapter 3 and 4 Practice Test</b>	p. 409 and 479	p. 409 (1, 3, 6) p. 479 (1-4 all, 6, 7, 8,9,10, 11-18 all, 19, 20-22 all )

5.1	<b>Systems of Linear Equations in Two Variables</b>	492	1-45 odd, 61, 63
5.2	<b>Systems of Linear Equations in Three Variables</b>	503	1-11 odd
5.5	<b>Systems of Inequalities</b>	537	27, 29, 31, 33, 77, 79, 81
PT	<b>Chapter 5 Practice Test</b>	552	1,2, 3, 15

### MATH 105 TENTATIVE MTWRF DAILY SCHEDULE

Date	Section(s) Covered	Additional Notes
Monday August 24	Introductions and P1	
Tuesday August 25	P2	
Wednesday August 26	P3	
Thursday August 27	Catch Up or HW Day	
Friday August 28	Review and Quiz	Review 15 min Quiz 30 min
Monday August 31	P4	
Tuesday September 1	P5	
Wednesday September 2	P6	
Thursday September 3	Catch Up or HW Day	
Friday September 4	Review and Quiz	Review 15 min Quiz 30 min
Monday September 7	1.1	
Tuesday September 8	Catch Up or HW Day	
Wednesday September 9	1.2	
Thursday September 10	Catch Up or HW Day	
Friday September 11	Review and Quiz	Review 15 min Quiz 30 min
Monday September 14	1.3	
Tuesday September 15	Catch Up or HW Day	
Wednesday September 16	1.4	
Thursday September 17	Catch Up or HW Day	
Friday September 18	Review and Quiz	Review 15 min Quiz 30 min
Monday September 21	1.5	
Tuesday September 22	Catch Up or HW Day	
Wednesday September 23	1.6	
Thursday September 24	Catch Up or HW Day	
Friday September 25	Review and Quiz	Review 15 min Quiz 30 min
Monday September 28	1.7	
Tuesday September 29	Catch Up or HW Day	

Wednesday September 30	2.1	
Thursday October 1	Catch Up or HW Day	
Friday October 2	Review and Quiz	Review 15 min Quiz 30 min
Monday October 5	2.2	
Tuesday October 6	Catch Up or HW Day	
Wednesday October 7	2.3	
Thursday October 8	Catch Up or HW Day	
Friday October 9	Midterm Exam	
Monday October 12	2.4	
Tuesday October 13	Catch Up or HW Day	
Wednesday October 14	2.5	
Thursday October 15	Catch Up or HW Day	
Friday October 16	Review and Quiz	Review 15 min Quiz 30 min
Monday October 19	2.6	
Tuesday October 20	Catch Up or HW Day	
Wednesday October 21	2.7	
Thursday October 22	Catch Up or HW Day	
Friday October 23	Review and Quiz	Review 15 min Quiz 30 min
Monday October 26	2.8	
Tuesday October 27	Catch Up or HW Day	
Wednesday October 28	3.1	
Thursday October 29	Catch Up or HW Day	
Friday October 30	Review and Quiz	Review 15 min Quiz 30 min
Monday November 2	3.2	
Tuesday November 3	Catch Up or HW Day	
Wednesday November 4	3.3	
Thursday November 5	Catch Up or HW Day	
Friday November 6	Review and Quiz	Review 15 min Quiz 30 min
Monday November 9	4.1	
Tuesday November 10	Catch Up or HW Day	
Wednesday November 11	4.2	
Thursday November 12	Catch Up or HW Day	
Friday November 13	Review and Quiz	Review 15 min Quiz 30 min
Monday November 16	4.3	
Tuesday November 17	Catch Up or HW Day	
Wednesday November 18	4.4	
Thursday November 19	Catch Up or HW Day	
Friday November 20	Review and Quiz	Review 15 min Quiz 30 min
Monday November 30	5.1	
Tuesday December 1	5.2	
Wednesday December 2	5.5	
Thursday December 3	Review and Quiz	Review 15 min Quiz 30 min
Friday December 4	Review for Final Exam	

Final Exams December 7-11 Exact Date and Time TBA (See your instructor)

## **12. College and Classroom Polices:**

### **a. Students with Disabilities**

The Office of Student Counseling and Disability Services coordinates campus-wide efforts to provide services and accommodations for students with disabilities. In compliance with the American Disabilities Act (ADA), students with documented disabilities who need course accommodations, have emergency medical information or require special arrangements for building evacuation should contact Dr. Ruth Osborne within the first two weeks of class at 318-342-3707 or in Coenen 144..

### **b. Attendance**

Attendance policies correspond to those listed in the *Delta Academic Catalog*. Class attendance is regarded as an obligation as well as a privilege, and all students are expected to attend regularly and punctually all classes in which they are enrolled. A student shall submit excuses for all class absences to the appropriate instructor within three class days after the student returns to the respective class. Students are responsible for all classwork missed regardless of the reason for the absence.

### **c. Academic Integrity**

Louisiana Delta Community College upholds standards of academic integrity of its students and faculty. Academic integrity is essential to assure learning through assessment. Students are responsible for being aware of and adhering to academic rules and regulations for the college and classroom as defined in the *Delta Academic Catalog* and *Delta Student Handbook*. Academic dishonesty includes but is not limited to cheating, fabrication, plagiarism, interference, misrepresentation, violation of class rules, and fraud. Identified instances of academic misconduct or dishonesty warrants disciplinary action by the instructor or college. Please refer to Delta's Academic Honesty Policy for more information.

d. Academic Support Services: Delta provides students with resources and support outside of the classroom through the Library/LRC in Coenen 150

([http://www.ladelta.cc.la.us/home/library\\_index.asp](http://www.ladelta.cc.la.us/home/library_index.asp)) and a Student Success Center which provides workshops and tutorial support.

### **e. Electronic Devices/Other noise-making devices**

Cellular telephones, beepers, and other noise-making devices must be turned off during class time. If this policy is not adhered to, you will be asked to leave the room to avoid further interruptions.

### **f. Safety Regulations**

No firearms, weapons, tobacco products, alcoholic beverages, or illegal drugs are permitted in the classroom. In the event you do not adhere to this policy, you will be asked to leave the classroom and expulsion from the college is possible.

## LOUISIANA DELTA COMMUNITY COLLEGE

### CODE OF STUDENT CONDUCT

All members of the College community are expected to respect the principles of honesty and mutual trust embodied in the honor code. Students are responsible for preparing their own written work in every class unless specifically permitted by the instructor to combine efforts on an assigned project. Students are expected to understand the meaning of plagiarism and to avoid all suspicion of plagiarism in papers prepared. Furthermore, students are expected neither to sanction nor tolerate violation of the honor code by others.

Students will not give or receive any unauthorized aid on any examination or paper. If a student witnesses anyone else doing so, that student must be reported immediately to the faculty member and/or the appropriate College administrator

### ACADEMIC MISCONDUCT

#### Types of Academic Misconduct (1.01)

Although all academic misconduct is wrong, premeditated acts of academic misconduct represent a greater threat to the integrity of the College than do unpremeditated acts of academic misconduct.

#### Categories of Academic Misconduct (1.02)

**Cheating** is the intentional use of inappropriate assistance, information, materials, or study aids in any academic exercise. Cheating includes the use of unauthorized assistance, information, or materials on tests, homework, quizzes, papers, projects, and all other academic assignments. Additionally, students who provide such unauthorized assistance are also guilty of cheating.

**Fabrication** is defined as altering official college documents, forging signatures of college officials or other individuals, or changing grades and other academic records. Fabrication also includes submitting false records to gain admission to the College. Furthermore, any oral or written misrepresentation of truth in any communication with College administrators, faculty, or staff is also fabrication.

**Plagiarism** involves submitting another person's ideas, words, data, arguments or sentence structure as the student's own without proper documentation.

**Misrepresentation** is intentionally presenting oneself as someone else, or intentionally misrepresenting a condition or situation to gain credit or concessions on academic work, including make-up tests, projects, and class assignments.

**Violation of class rules** is the intentional failure to follow the class policies concerning assignments and behavior.

Other forms of academic misconduct include **complicity**, the willing involvement with others in any academic misconduct; **software fraud**, the unlawful downloading and copying of computer software used in the creation of academic work; and **multiple submissions of work**, handing in academic work that was done previously by the student for another class, or by someone else.

### **Disciplinary Sanctions for Academic Misconduct (1.03)**

Depending on the type of violation, the number of times a student has committed an offense, and the discretion of the instructor, penalties may include any combination of the following:

1. Loss of partial credit for the assignment.
2. Reduced grade for the course.
3. Grade of "F" for the course
4. Zero assigned to test or assignment.
5. Academic Probation
6. Counseling
7. Academic Suspension
8. ExpulsionAdministration of Penalties (1.04)

Instructors assign penalties to the student based on the above criteria. Student appeals of the penalty will be directed to the appropriate Academic Supervisor, or, if necessary, to the Dean of Instruction.

Should the student's violation of the Academic Honesty Policy warrant probation, suspension, or expulsion, the matter will be referred to the **Admissions and Academic Appeals Committee. Appeals of penalties will be directed to the Vice Chancellor of Academic and Student Affairs.**

**The complete Academic Misconduct policies and the Due Process Procedure (sections 1.05-1.06) are listed in the Student Handbook.**

**Other classroom policies:**